This will insure that it may be utilized without having to change out every receiver in an existing radio network. This change to the GEM paging format will significantly lower the pager battery life of GEM receivers and will result in an inability to achieve the same overall capacity of a true GEM channel. Yet it will significantly improve the channel capacity of existing paging networks.

IV. The Proposed Allocation

66. The Joint Venture proposes the allocation of three nationwide 25 kHz channels and three regional 25 kHz channels dedicated to GEM technology and the adoption of rules and policies in Part 22 which would facilitate the establishment of such service. Those rules should require GEM licensees to take advantage of the full speed of the GEM format and to offer all or most of the major new and enhanced service opportunities of the service within a set period after initial licensing. These relatively modest allocations would foster a tremendous advance in paging capacity and capabilities. The Joint Venture submits that the detailed technical demonstration herein and the inherent desirability of the GEM enhanced services preclude the need for field testing to demonstrate technical feasibility or marketability of the services before proposing the requested allocation.

67. Because of the general move of the paging market away from local and towards regional and national service and

because of the vagaries of state regulation, no specific allocation for local service is requested. Also, no provision for Part 90 licensing is requested at this time, inasmuch as shared use of a channel would substantially diminish the efficiencies of GEM operation. Some of the innovations fostered by GEM technology, however, would likely soon find their way into local and private radio paging systems through the operation of the marketplace, without the need for specific allocations.

68. The allocation of the nationwide GEM channels is important because they would permit the provision of this markedly different (and superior) service to subscribers with a need for GEM in more than one region. The Commission has, of course, already determined that dedicated 900 MHz nationwide channels meet a public need, and the marketplace has decisively proven that determination correct. The new and improved services which GEM would permit, including more efficient alphanumeric, recipient response, and facsimile reception and display paging, would present particular advantages to nationwide travellers. Subscribers who travel across regions would be materially aided by GEM in contending with such travellers' predicaments as time-zone differentials, separation from their offices and staffs, absence from their cellular mobile units, and lack of a fixed facsimile address.

69. The GEM nationwide allocation would introduce more facilities and service based competition to the current nationwide market. The allocation of three nationwide GEM channels should create a diverse enough market to nurture true competition among the nationwide GEM providers.

70. The Joint Venture also proposes the allocation of three regional channels, all of which would be assigned to each of the four time zones. Any regional division of the United States is fundamentally arbitrary, but the time-zone division should support twelve strong regional paging companies which would provide GEM service in readily defined areas.

71. The Commission should set reasonable deadlines for the implementation of nationwide and of regional service after a grant of license. The "build-out" standards utilized in the regulation of conventional 900 MHz nationwide services would be appropriate staring points for inviting public comment in the notice of proposed rule making to be issued in this docket, although somewhat more leeway should be accorded GEMS licensees in view of the comparative novelty of the service.

72. The Joint Venture proposes that GEMS service providers be regulated by the Commission as common carriers, on a non-dominant carrier basis. Because the service as proposed would be essentially national or regional, the Commission should preempt state regulation. Decisions among mutually exclusive applications for use of the allocations could be made

by random selection among those applicants which are determined to be technically and financially qualified.

V. The Pioneer's Preference for the Joint Venture

73. The Joint Venture requests that it be awarded a pioneer's preference in connection with the implementation of GEM paging. As noted in the introduction, GEM paging falls squarely within the description of AMS as envisioned by Telocator in the rule-making petition which has given rise to the pioneer's preference proposals in this docket. In fact, in Reply Comments filed March 26, 1991, at page 6, Telocator cited Joint Venturer Real Time Strategies' Pagentry unit as "an AMS class device". The rights to the entire technology of that device have been transferred to RTS. In that same document, at pages 7-8, Telocator noted a number of developing new-generation paging services which compel new spectrum allocations. The listing included the following new services which would be offered by GEM:

- Alphanumeric paging operating in conjunction with database services to provide integrated information delivery mechanisms
- Electronic mail systems, for both conventional and data applications
- Graphics and facsimile services.

Telocator also made the case that such advanced services not practicably be offered through systems operating on existing allocations.

74. The Joint Venture should be accorded a pioneer's preference for one of the three proposed nationwide licenses, pursuant to Section 1.402 of the rules. GEM will, as demonstrated above, provide new paging services and, by use of innovative technology, substantially enhance existing services and significantly improve spectrum efficiency through innovations in use, speed, and quality of information transfer. Its innovations include added functionalities and a substantial change in the operating and technical characteristics of the radio common carrier paging service. The Joint Venture, directly or derivatively through its constituent venturers, has developed the underlying technology and concepts and deserves credit as the innovating party of the GEM concept. If for any reason the Commission decides to create fewer or more than three such nationwide channels, the Joint Venture should still receive a pioneer's preference which insures it a license for one of the nationwide allocations.

75. In making this proposal for a nationwide pioneer's preference, the Joint Venture is mindful of the Commission's admonition that a preference of such scope will not routinely be awarded. Report and Order in GEN Docket No. 90-217, 6 FCC Rcd 3488, 3495 (1991). It is submitted, however, that GEM service along the lines proposed will be, at least in part, "inherently nationwide". With the multiple licensee allocations plan proposed herein, grant of a preference to the

Joint Venture for one of the nationwide channels would serve to stimulate the most expeditious development of the service without sacrificing the goal of diversity.

76. If for any reason the Commission determines that the public interest would be best served by declining to make a nationwide allocation but by making four or some other number of regional allocations, the Joint Venture should receive a pioneer's preference for a regional license. If the regions are established by time zone, the Joint Venture would express its preference for a license for the Eastern time zone. This preference is prompted by Message Center's concentration of business in that zone. In addition, the Joint Venture is engaged in discussions with a Canadian paging company concerning possible coordination of use of a nationwide or regional paging channel between the two countries. An Eastern time zone regional allocation would offer the possibility of such coordination with access to a highly populated area of Canada. If regions are established by some other process than proposed or anticipated herein, the Joint Venture will at the proper time choose the pertinent area for preference licensing.

77. In any event, the pioneer's preference should provide that the Joint Venture's application for a construction permit/license for GEM service on the newly allocated frequencies will not be subject to mutually exclusive applications, pursuant to Section 1.402(d) of the rules.

WHEREFORE, the premises considered, the Commission should propose rule making to adopt rules and policies to implement GEM paging service and should propose to grant the Joint Venture a pioneer's preference for a nationwide channel.

Respectfully submitted,

GLOBAL ENHANCED MESSAGING VENTURE

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June 1, 1992

ABSTRACTS

Many of the key managers of Real Time Strategies have been directing large scale projects and consulting organizations for over twenty years. The experience they have gained in project management, software quality control, development methods, as well as maintenance and support of online systems, is taught to their employees as part of the corporate philosophy. Proven techniques that have been developed by these individuals have been continually enhanced by the ideas of other RTS staff members. These abstracts will present only a small part of the rich experience the key management brings to the organization.

Jay Moskowitz, President and Chief Executive Officer of the company, has been a designer and manager of software intensive real time systems for over 22 years. Prior to forming Real Time Strategies, Mr. Moskowitz served for more than 5 years as Senior Vice President of Engineering for Spectrum Communications and Electronics Corp., a manufacturer of large scale telecommunication systems used on a worldwide basis. From 1977 until 1983, Mr. Moskowitz was employed by Lambda Technology Inc. (LTI) as a Senior Consultant in the development of telecommunication, minicomputer and microcomputer based systems for, among others: ITT Domestic Transmission Systems Inc., Xerox - XTEN, Western Union International, MCI and Citibank. During Mr. Moskowitz's tenure with LTI he was responsible for the design of many systems in the area of custom packet switching and message switching products. Prior to LTI, Mr. Moskowitz served with Graphnet Systems Inc. and Graphic Scanning Corp. where he served as Senior Design Engineer of store-and-forward switching systems, Director of Product Development for automated telephone answering systems, as well as serving as an internal consultant in many other areas of telecommunications including cellular radio. Mr. Moskowitz was president of Intersystems Software Inc., where he developed and marketed TICKERTEC(tm), a real time stock market quotation system installed in over 25 states and Canada. Mr. Moskowitz received a B.S. degree in Physics from The Cooper Union, is a senior member of the IEEE, a member of the ACM and is Chairman of the Telocator Network of America (TNA) Telocator Network Paging Protocol (TNPP) Committee.

Spencer Kravitz, Executive Vice President of the company served for 5 years as department manager and Assistant Vice President of Software development for Spectrum Communications and Electronics Corp. Mr. Kravitz was one of the primary architects of SCE's Radio Paging, Voice Mail, Hospital Staff Management, Automated Telephone Answering and Networking products. Prior to joining SCE, Mr. Kravitz was employed by General Electric Professional Services Company as a Senior Consultant in the development of telecommunication, minicomputer and microcomputer based real time systems. Some of his clients included: ITT, Metropolitan Life Insurance Co., Congoleum Corp. and Citibank. He was formerly with Eastman Kodak Co., where he served as Management Consultant specializing in telecommunications and process control systems. In addition, Mr. Kravitz has served as a consultant to small and mid-size businesses in the area of office automation. He holds a B.A. from Queens College and an M.B.A. from Baruch College, both of the City of New York.

Resume of
Jay Moskowitz

PERSONAL: Date of Birth: Sept. 1948

EDUCATION: SUNY Binghamton, 1970 -1971
Graduate Courses in Computer Science

The Cooper Union - New York, New York, 1966 - 1970
B.S. - Physics

ABSTRACT: Over 24 years' experience in the management, design implementation, cutover and support of large and small scale software based systems, single processor and distributed systems, from micros to mainframes, covering a wide range of applications and businesses, with a special focus on telecommunications based systems.

Systems experience includes Radio Paging, Voice Store and Forward, Cellular Radio, Automated Telephone Answering, Message Switching, Real Time Executives and OS's, Compilers, Timesharing, Process Control, Packet Switching, and other Real Time Systems.

Frequent author and lecturer in telecommunications.

HARDWARE: IBM 370, 360, System 34, 1800, 1130, 1620; CDC 3200; XDS Sigma 5; GE 437, Datanet 30; Standard IC 6000; Intel 80x86, 8086, 8080, 4004; DEC Vax, MicroVax, PDP-11, PDP-8; GA SPC 18/30, 16, 12; EPI 118; SEL 86; Interdata 8/32, 78/16; Wang 2200; Varian V-73, 620/F; Modcomp IV; NS-IMP 16; Zilog Z80; Prime; Motorola 680x0, 680x; and others

COMPUTER LANGUAGES: C, BAL, BASIC, ALGOL, FORTRAN, PL/I, APL, PASCAL, Assembly Languages

ORGANIZATIONS: IEEE - Senior Member, ACM, Telocator, Chairman Telocator TNPP, TAP and TDP Committees, Member of High Speed Paging Committee

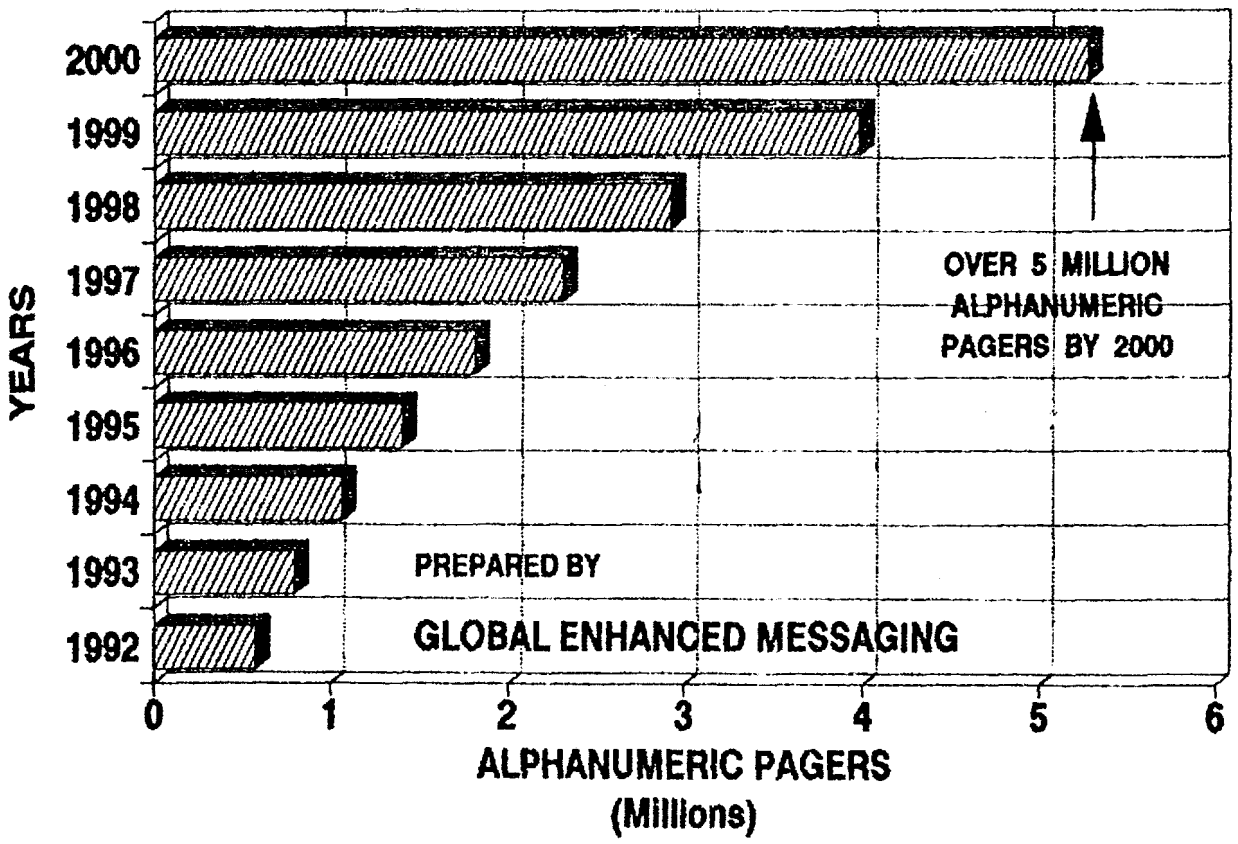
EXPERIENCE:

- Primary designer of customized telecommunication systems for the radio paging, telephone answering, voice mail and cellular telephony industries for stand alone and networked systems
- Designer of store and forward X.25/Telex message switching systems
- Designer of store and forward facsimile packet switching systems
- Developer of redundant systems and recovery facilities for telecommunications and financial applications
- High level telecommunications consultant in defining and evaluating potential service offerings of various companies and implementation strategies
- Developed system architecture for the Xerox XTEN communications network
- Designer of specialized OS for the Interdata 8/32 Supermini
- Member of product planning and strategy committees
- Developer of stock market quotation systems
- Designer of various message switching systems
- Developer of the first fully automated Telephone Answering System
- Extensive analysis of facsimile data compression algorithms
- Extensive design and development of specialized real time systems for various industries

MAJOR COMPANIES SERVED: Graphic Scanning Corp., Graphnet Systems, ITT, CitiBank, Spectrum Communications, Xerox, Western Union International, MCI, NASA, BBL, U.S. West NewVector Group, Ameritech, Tigon, OCTEL, Glenayre Electronics, NYNEX, Cincinnati Bell, PACTEL, National Pagette, CUE Paging, Cantel, MTEL, MobileComm

Attachment 1

PROJECTED U.S. PAGER MARKET GROWTH
FOR ALPHANUMERIC DISPLAY PAGERS



PROJECTED U.S. PAGER MARKET GROWTH.

Potential number of message entry devices in the U.S.
with an estimate of GEM's potential market share.

YEAR	TOTAL # OF PAGE	% ALPHA	# OF ALPHA'S	# OF ENTRY DEVICES TOTAL	ADDTNL	GEM MARKET SHARE	GEM MARKET SHARE #
1992	11.50	5%	0.575	575,000	0	0%	0
1993	13.23	6%	0.794	793,500	218,500	5%	10,925
1994	15.21	7%	1.065	1,064,613	271,113	10%	27,111
1995	17.49	8%	1.399	1,399,205	334,592	12%	40,151
1996	20.11	9%	1.810	1,810,221	411,016	14%	57,542
1997	23.13	10%	2.313	2,313,061	502,839	16%	80,454
1998	26.60	11%	2.926	2,926,022	612,961	18%	110,333
1999	30.59	13%	3.977	3,976,730	1,050,708	20%	210,142
2000	35.18	15%	5.277	5,276,814	1,300,085	22%	286,019

Major PAGENTRY Commands

			See Page
Directory	Keep (Store) Directory Information	KEEP	31
	Recall Directory Information	RECALL	32
	Create & Change Groups of Directory Entries	EXTRA G	34
Canned Text	Create & Change Canned Text	EXTRA C	36
	Use Canned Text	EXTRA A A	37
Paging	Create Pager Records	PAGE	38
	Transmit Pager Message(s)	SEND	39
Fax	Overview & Formats	—	41
	Create Fax Records	FAX	42
	Transmit Fax Message(s)	SEND	43
	Create & Change Fax Header	EXTRA H	45
	Fax Options	EXTRA F	45
Calculator	8 digits, 4 functions	CALC	46
Time/ Date	Date: Select Format, Set Date	EXTRA D A	47
	Time: Select Format, Set Time	EXTRA T I	48
Alarm & Reminders	Sound Alarm at Date/Time	EXTRA A	49
	Reminder at Date/Time	EXTRA R	50
Printouts	Directory, Groups, System Parameters	EXTRA P R	51
Data Svc	Dial Data Service	DATA	52
System Parameters	Baud Rate	EXTRA B	55
	Power-up in....Page, Fax, etc.	EXTRA P O	55
	Key Click	EXTRA K	56
	Scroll Speed	EXTRA S C	56
	Security Enable/Disable	EXTRA S E	56

Note: See complete alphabetical list of EXTRA Functions starting at page 24.

CONTENTS: SECTION I

HOW TO USE THIS GUIDE

READ the four parts in Section I of the Guide (Overview, Memories, Concepts and How-To), then refer to the individual Functions in Section II as you want additional information.

Section I is designed to introduce you to PAGENTRY's Features and Functions quickly, with a minimum of extraneous information. Section II goes into more detail about each. For review, you will probably only need to look at the How-To Section to refresh your memory.

Note: PAGENTRY™ is pronounced like "pageantry"

Inside Front Cover

O V E R V I E W

PAGENTRY offers five functions:

(1) Radio Page requests
(2) Fax messages
(3) Data service computer terminal
(4) 4-function Calculator
(5) Date/time triggered Alarm and Reminder messages

In support of this, PAGENTRY includes these features:

(1) A Directory of names, phone numbers, pager IDs and general information
(2) Groups of Directories
(3) Canned Text storage and use
(4) User selection of System Parameters
(5) Printouts of Memories and System Parameters

All of these functions and features are accessed via the keyboard, which can be used to enter letters, numbers and special characters (see "The PAGENTRY Keyboard," pages 5–7).

The following information presents an overview of how each Function and Feature operates. Starting on page 17 of Section I, the "How To" pages will give you brief information on using PAGENTRY. Section II provides more in-depth information.

PAGING

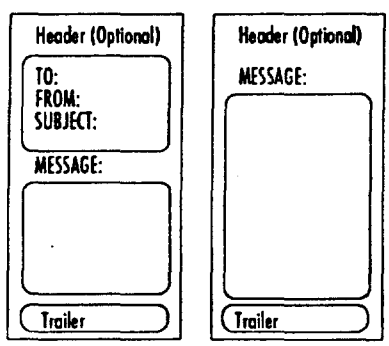
Type in the Directory Entry name and the Message for as many separate radio page requests as you want. This data is stored in Page Memory until transmission has occurred. The Directory lists names and phone number(s) you have entered for permanent storage. PAGENTRY will look up the proper number in the Directory at the time the Page request is sent.

Your Message can be composed partly or entirely of text from a library of Canned Text you create (see p. 5).

You do not have to enter the data for all the Page requests in a single session. You can type them into Page Memory from time to time and PAGENTRY will remember them even during times the unit is turned off. When you are ready to transmit, all the Messages in Page Memory are sent and then automatically erased from Memory if successfully received by the paging system(s).

FAXING

This works just like Paging except that Faxes can have either of two formats, as shown below:



DATA TERMINAL
Using either the RJ11 jack cable or optional acoustic coupler, you can dial into a data service and use PAGENTRY as an interactive computer data terminal.

CALCULATOR
PAGENTRY can be used as an 8-digit 4-function calculator.

ALARM CLOCK AND REMINDERS
PAGENTRY can be used just like an alarm clock, except that the Alarm can be set for a specific date, in addition to the time. You can include a Message which will be displayed when the Alarm or Reminder goes off and you can have several Alarms or Reminders set at one time.

DIRECTORY AND GROUPS
The Directory Names you enter for each Page and Fax are your contact names and the various information you need for each, such as phone number, pager number, Fax number, and three fields of general information of your choice. You enter these into PAGENTRY's Directory Memory where they will be permanently stored for your use — much like setting up an index card file.

When you use the Directory name for Paging, Faxing, or connecting to a data service, PAGENTRY automatically selects the appropriate telephone number from its Memory for the operation you are performing.

CANNED TEXT
You can store pieces of text of any length from a single character, to a long phrase, to an entire message in the Canned Text Memory. These can then be recalled and entered into Messages you are creating for a Page, Fax or Reminder. You can use Canned Text alone or in any combination with text you type into a Message, and you can edit the result at any time. Changes you make to copies of the Canned Text inserted into a Message will not alter the original Canned Text stored in Memory. You can, however, return to Canned Text Memory to edit or delete stored text.

SYSTEM PARAMETERS
You can customize the operation of PAGENTRY through the selection of various System Parameters. These Parameters control Features such as Key Clicking while typing, the speed at which displays move ("scroll") through the window, which of the PAGENTRY Functions is operative when the unit is turned on, and many other parameters. Parameters are set through the use of the EXTRA command (see p.8).

PRINTOUTS
You can print the contents of PAGENTRY Memories and the current System Parameters to a Fax machine.

The PAGENTRY Keyboard
The PAGENTRY keyboard has 35 keys which are used to enter letters of the alphabet, numbers, special characters, to edit data and information, perform mathematical functions, request HELP, and specify PAGENTRY Commands.

In order to provide all these capabilities with only 35 keys, all keys have two functions which are accessed through the NUMBERS (^) and LETTERS (v) keys located at the lower right hand corner of the keyboard (see illustration, page 12). Whenever the LETTERS (v) key is pressed, the keyboard is shifted into "LETTERS Mode." The LETTERS and NUMBERS keys act much like the "shift-lock" on a typewriter.

In LETTERS (v) Mode, all of the characters and functions written on the keys themselves (in white) are active. When the NUMBERS (^) key is pressed, all of the characters and Functions written above the keys (in red) are active.

The NUMBERS (^) Mode is displayed in the PAGENTRY display window as the ↑ symbol. The LETTERS (v) Mode is displayed in the window as the ↓ symbol.

Once the NUMBERS key is pressed, the keyboard will normally remain in NUMBERS Mode until the LETTERS key is pressed, and vice versa. However, if a field normally requires numeric input (as for telephone number, date or time, and the Calculator Function), the keyboard automatically shifts into NUMBERS Mode.

The keyboard also automatically shifts into NUMBERS Mode if you request the EXTRA function while entering information into a PAGENTRY Memory. This is in anticipation that you are about to enter the number of a Canned Text message you wish to insert.

Most PAGENTRY entry is completed by pressing the [ENTER] key. A common problem while entering numeric information, such as a telephone number, is to press the [ENTER] key to complete the input without shifting the keyboard back to LETTERS Mode before hitting

[ENTER]. Pressing the [ENTER] key while the keyboard is in NUMBERS Mode normally means SEND, = or SELECT. In order to simplify data entry, the [SELECT] key is treated as if the [ENTER] key was hit when completing the input of numeric data.

Hitting NUMBERS (^) while in the NUMBERS Mode or LETTERS (v) while in LETTERS Mode has no effect. If you are not sure of the current shift mode, you can hit the NUMBERS or LETTERS key again.

IMPORTANT

To access PAGENTRY Commands and Functions shown in red above the keys, press the NUMBERS Key (^) at the lower right corner of the keyboard, followed by the key for the Command, Function or character desired.

In this manual, PAGENTRY Commands and Functions are illustrated as if they were a single key. The ERASE Command, for instance, is shown as [ERASE]. But remember that the keyboard must be in NUMBERS Mode, or shifted into NUMBERS Mode before pressing the Function or Command key desired. So in this example, if the keyboard is not already in NUMBERS Mode, [ERASE] is executed by two keystrokes: [^] and [E]. ([E] becomes [ERASE] key when you are in NUMBERS Mode).

Keyboard Repeat
All keys on the PAGENTRY keyboard have a repeat capability. If any key is held down, the input of that key will be repeated over and over again. This can be used to scan from record to record (with the [ENTER] key), or to enter repetitive characters into the text of a message.

OVERVIEW

The PAGENTRY Keyboard in Calculator Mode

When you enter Calculator mode, the keyboard stays in NUMBERS Mode and the addition (+), subtraction (–), multiplication (*), and division (/) symbols are used to perform mathematical functions. The equal sign (=) displays the result of calculations:

Operation	Command
+ add	+
– subtract	–
* multiply	*
/ divide	/
= equals	=

The [ERASE] key is used to clear any numeric data entered in error and the [CLEAR] key clears the Calculator Memory, resetting it to zero.

EXTRA Functions

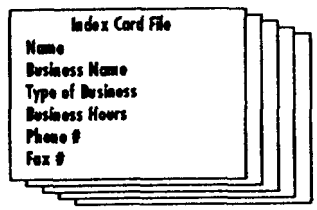
Even though the 35 keys of the keyboard provide 70 keys using the NUMBERS (^) and LETTERS (v) shift keys, PAGENTRY performs even more functions than can fit on this keyboard. So to access any of the many Expanded Functions, the [EXTRA] command is executed. This command provides a "menu" — a list of Extra Functions which moves (scrolls) through the window, and from which the user can select options (see "Using the EXTRA Functions," p. 21). If you know the proper "Menu Selection Code" for the Function you want (see pages 24–28), you can enter it immediately rather than scanning through the entire menu.

OVERVIEW

Memories, Records and Fields

PAGENTRY has the capacity to permanently "store" various types of information which you enter into its Memories.

Each PAGENTRY Memory can have one or more records. A record consists of one or more fields. For instance, a Page Memory record has two fields: Page To: and Message:.



Each PAGENTRY Memory is similar to an Index Card File. Each card in the file is a "record." And each piece of information on the card (name, business name, type of business, business hours, phone number, Fax number) is a separate "field."

Some PAGENTRY fields call for a specific type of data. For example, Page To: requires a Directory Name. Others may require numbers only. A PAGENTRY "message field," is like a whole paragraph. It can be of any length and can also contain periods, other punctuation and symbols.

The following two pages show the various PAGENTRY Memories and what information each Memory contains in its records and fields.

MEMORIES

DIRECTORY Memory

Name:
Info1:
Info2:
Info3:
Tel #:
Fax Tel#:
Pager Tel#:
Pager ID:
(T)AP/(A)lpha

GROUP Memory

Grp Name:
Member1:
Member2:
•
•
•
Member "n":

PAGE Memory

Page To:
Message:

CANNED TEXT Memory

"nnn": (CANNED Text)

(In Canned Text, a record and a field are the same, and you may have as many records as you like.)

FAX Memory

Fax To:
To:
From:
Subject:
Message1:

Message "n":

MEMORIES

DATE (Clock) Memory

Month:
Day:
Year:

(A single-record Memory.)

TIME (Clock) Memory

Hour:
Minute:
Second:

(A single-record Memory.)

ALARM & REMINDER Memory

Month:
Day:
Year:
Hour:
Minute:
Message:

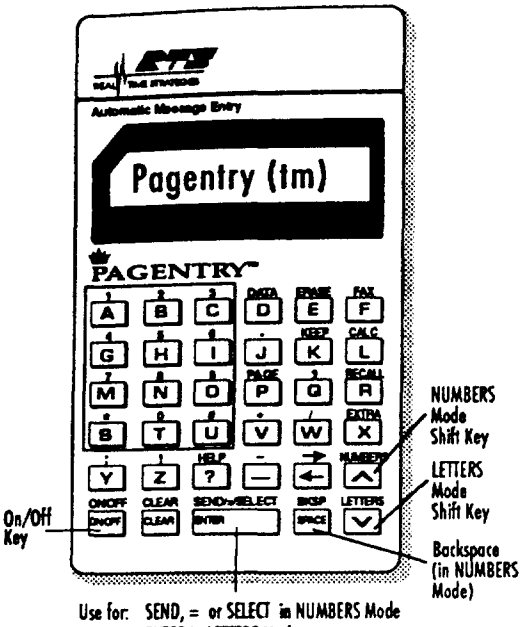
SECURITY Memory

Password:

(A single-record Memory.)

Note: Whenever accessing a single-record Memory, PAGENTRY automatically goes into Edit Mode. Since there are no other records to scan to, PAGENTRY assumes you wish to edit this single record. See page 18, "Editing and Edit Mode."

The PAGENTRY Unit



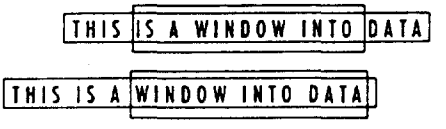
Examples:
To go into FAX Mode, hit ^ followed by F
To go into PAGE Mode, hit ^ followed by P

PAGENTRY Commands

You use Commands to access the various Memories (Directory, Page, etc.), and to perform tasks such as transmitting messages, setting an Alarm, etc. All PAGENTRY Commands are entered while in the NUMBERS Mode (^). For example, PAGE (^ P) is used to store or send a Page request. Throughout the manual the Commands, characters and Functions printed in red above the keys will be shown as single keys: PAGE. Remember to shift into the NUMBERS Mode (^) first to access these Commands or Functions. (See "Shifting the Keyboard," page 14, and "IMPORTANT," page 7.)

The Display Window

The PAGENTRY display is a 16–character window on a Memory. It looks at one field at a time. If the field is longer than the window, the text can be moved back and forth ("scrolled") in the display window, so you can see any part of the field you want.



Cursor

The cursor is a blinking character which tells you "where you are"—that is, where the next character will appear if you type one. It also indicates whether the keyboard is shifted up for NUMBERS, Functions and Commands, or down for LETTERS by alternating between displaying

the character in the current field position and the current shift symbol (↑ for NUMBERS or ↓ for LETTERS).

Shifting the Keyboard

Enter LETTERS Mode by first shifting down with the v key (located at the lower right hand corner of the keyboard). To type numbers and PAGENTRY Commands and Functions (those shown in red above the keys), enter the NUMBERS Mode by shifting up with the ^ key. The cursor indicates what the current mode is by blinking a ↑ (NUMBERS) or ↓ (LETTERS) in the display window.

Scrolling

Text moves ("scrolls") through the display window 16 characters at a time. You can scroll forward and backward within the field, from field to field and from record to record.

Prompts

PAGENTRY displays phrases known as "prompts" to request input from the user or display information. The illustration on the next page shows an information prompt.

Accessing Memories

You can access (go to) any PAGENTRY Memory any time you want. The display is initially positioned at the beginning of the first field of the first record in that Memory, with the prompt for that field on the left side of the display. The following example shows a Page record.

Page To:POGORZEL SKI
Message:CODE 4 P RESBYTERIAN HOSP EMERG

Scan Mode — No Cursor

When you access a Memory with data in it, there is no cursor. This tells you PAGENTRY is in Scan Mode. In Scan Mode, you can move from record to record, seeing the beginning of the first field for each. Scanning is like flipping through your index cards. You can stop at any record and shift into Edit Mode to view the entire field or make changes to the text.

Edit Mode — Cursor Blinking

Edit Mode allows you to stop at a record and move from field to field. Also, at any field you can scroll the display back and forth along the field's entire length. If you reach the end of a field (rightmost character), an arrowhead appears in that location for a period of one second to let you know there are no more characters in the field. If you enter characters at the end of a field they are added to that field.

When you shift into Edit Mode, the cursor appears immediately. As the term "edit" implies, you can make any changes you want to the contents of any field in the record. Edit Mode can be used both for viewing as well as for modifying information you stored previously. You can shift back into Scan Mode and move on at any time by pressing ENTER until you get to the first field of the next record.

Skipping to a Record or End of Memory
You can skip directly to a specific record by typing the first few characters of its first field. You can also skip to the end of the Memory — that is, to the first field of the first empty record — by pressing [+] [ENTER].

Create Mode — Cursor Blinking
If you access a Memory with no data in it, or you get to the first empty record at the end of a Memory, PAGENTRY shifts into Create Mode so you can create new records.

The prompt for the first field is on the left as usual, but the display is otherwise empty. The cursor is on the far right. As soon as you begin typing data, the prompt disappears. As you type, the data is pushed to the left until the display is full. Then as you continue typing, the first-typed characters move off the left end of the display, as the display window moves forward to the right.

If you forget which field you are in, press [HELP]. HELP will display a message telling you the Function you are currently performing and the name of the field you are currently working in.

Leaving a Memory
You can leave a PAGENTRY Memory at any time either by turning off the unit or pressing any PAGENTRY Command to perform another task.

The following "How-To" pages give brief explanations of the more common PAGENTRY functions and features. See Section II for more detailed information.

Commands
Commands are used either to access a Memory, such as Page Memory, or to perform a task, like setting the Time of Day. Every command starts with [^], which shifts the keyboard up to NUMBERS and Command Mode. The command is executed immediately and PAGENTRY shifts into LETTERS Mode, just as though you pressed [v]. (The only exception to this is when the specific command calls for numeric entry — for example, when in Calculator.)

Scan Mode — No Cursor
The Scan Mode is in effect whenever you access a Memory with data in it. To move from one record to another through Memory, press [ENTER]. At each record you see the field prompt and the first several characters of the first field. To scan quickly from record to record, hold down the [ENTER] key.

Accessing a Record Directly
You can also go directly to a record. In Scan Mode, type the first few characters of the text contained in the first field of the record that you want, and press [ENTER]. If the text you typed exists, you skip to the first field of that record and are in Edit Mode. If there is no such text, a message will appear briefly and the display will continue to show

the last field displayed. To skip directly to the first empty record at the end of Memory, press [+] [ENTER].

Editing & Edit Mode — Cursor Blinking
You can shift to Edit Mode from Scan Mode at any record. When you get to the record you want, press [SELECT] to "select" it for editing or to view it in its entirety.

GROUPS contain a variable number of Member fields, and FAX allows a variable number of Message fields. If you want to add one of these fields to such a record, skip to the end of the record by pressing the [ENTER] key until a blank field is displayed. Type in the data and press [ENTER]. You can add as many fields as you want. When you are done, press [ENTER] at the next blank field. You will return to Scan Mode at the beginning of the next record.

Leaving Edit Mode
You can leave Edit Mode (and the record you are working on) by pressing [ENTER] until you go to the first field of the next record. After leaving Edit Mode, PAGENTRY returns to Scan Mode unless there are no more records in that Memory, in which case PAGENTRY will go into Create Mode.

Deleting a Record
Scan to the record you want to delete. Select the record by pressing [SELECT]. Press [ERASE] [ENTER]. This deletes the record from Memory and places you at the first field of the next record. You are automatically

returned to Scan Mode (no cursor). The only exception is if the next record is the empty record at the end of Memory, in which case you will be in Create Mode.

Entering a New Record
If you are in Scan Mode and are not at the end of Memory, scan there by pressing [ENTER], or skip there by pressing [+] [ENTER].

Type in the data for each field and press [ENTER]. The prompt for the next field appears. When you have typed the data for the last field, simply press [ENTER]. The blank first field for another new record is displayed. You can either make new entries or leave the Memory by giving a PAGENTRY Command.

If you are in a record that can have a variable number of fields, you can end the record by pressing [ENTER] at an empty field without entering anything. Or to put it another way, after you finish entering data in the last field, press [ENTER] twice.

Typing Data into Fields — Create Mode
When you are in Create Mode, the field is blank and the cursor is in the rightmost position of the display, with the prompt at the far left. As soon as you begin typing data, the prompt disappears. As you type, the data is pushed to the left until the display is full. Then as you continue typing, the first-typed characters move off the left end of the display, as the display moves forward to the right.

In Create Mode, the [BKSP] key erases characters to the left of the cursor. [SPACE] adds spaces to the right.

In Edit Mode, ← moves the cursor to the left, and → moves the cursor to the right. [BKSP] deletes the character over which the cursor is blinking. Entering characters types over the information already in a field. If you enter a ← at the first character of a field, an arrowhead will appear to indicate that this is the beginning of the field.

You can erase an entire field with the [ERASE] key. The next character typed will become the first character of the field. You can clear everything from the cursor to the end of a field with [CLEAR].

Note: As you can see, PAGENTRY allows deleting characters and overwriting existing information as you type in new data. It does not, however, have a simple mechanism to insert new characters. You may want to create a Canned Text Message consisting of one or more spaces to insert spaces into a message so you can then type over these spaces with new information.

Whenever Canned Text is added to a Message being composed, the text is inserted into the message at the cursor position.

Using Canned Text

Canned Text is entered into a Message by typing [EXTRA] (see "Using the EXTRA Functions," below), followed by the appropriate code numbers for your stored Canned Text, then [ENTER]. For example, [EXTRA] [1] [6] [ENTER] will select your previously created Canned Text phrase #16.

Using the EXTRA Functions

Unlike other PAGENTRY commands (for example, PAGE, FAX and CALC) which perform only a single task, the EXTRA Command accesses more than 30 different Functions, such as creating and editing Canned Text messages, creating and editing Directory Groups, defining the Header contents on Faxes, and many more. (See pages 24 – 28 for a complete alphabetical listing.)

The EXTRA Command provides a Menu of commands from which you can select the one you wish to execute. Each Menu entry is displayed in the display window as a Menu Selection Code, consisting of one or more characters, followed by the name of the selection. For example, the first menu selection is "A Alarm Clock."

If you wish to view the different Menu selections, "scan" through the list the same way you scan through records. Each time [ENTER] is pressed, the next Menu selection will be displayed. After the last selection appears and [ENTER] is pressed, the first selection will reappear.

To select a particular Menu entry, press [SELECT] when the desired entry appears in the display window.

In many cases, after choosing a Menu selection a Submenu appears which will provide further options for the function you selected. You may scan through these options by pressing the [ENTER] key. Once the desired option is shown, press [SELECT] to choose that option.

For example, if you wish to define the PAGENTRY function which is operative when the unit is turned on, scan through the Menu until the code "PO Power Up Mode" is displayed. Press [SELECT] to indicate that you wish to change the Power Up Mode. The first option, "C Calculator,"

will appear, showing that the default Power Up Mode can be changed to start up as a Calculator. This means that when you first turn on PAGENTRY, the Calculator would be operational until you choose a different Function. If this is not the desired Power Up Mode, continue pressing [ENTER] until the desired option appears — for example, "T0 Time Date." If you want the Time and Date to appear whenever PAGENTRY is first powered on, press [SELECT], when this option appears in the window.

Skipping Directly to an EXTRA Function

When the [EXTRA] Command is first executed, the display screen will indicate that [EXTRA] has been selected and will show the "ENTER For MENU" prompt. Rather than scanning to the desired selection by pressing [ENTER] repeatedly, you can skip directly to the desired option if you know the sequence of Menu Selection Codes.

For example, you can immediately program the PAGENTRY Power Up Mode to display the time and date by the following keys:

[EXTRA] [P] [0] [T] [D]

A prompt will appear indicating that the Power Up Mode option has been changed. You do not need to wait for the prompt to disappear before entering the other selection characters.

An alphabetical list of all Menus and Submenus for the EXTRA Function starts on page 24. Each Submenu is indented under the Menu entry which will cause the display of this Submenu in the window.

Cancelling EXTRA Mode

After an EXTRA Function is executed, a message is normally displayed and the display is returned to a blinking PAGENTRY prompt. If you want to cancel EXTRA Mode without selecting any Function, you can enter another Command, turn off the unit, or hit EXTRA a second time to cancel the original EXTRA Command. Pressing ENTER after hitting EXTRA begins the display of the EXTRA Mode Menu.

During EDIT Mode, the EXTRA key can be used to input Canned Text or to change the keyboard from Upper case to Lower case. Any other input after the EXTRA key is pressed is treated as a command to terminate the current EDIT Mode session and to execute the new EXTRA Command.

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EXTRA Functions

Menu Selection Codes [EXTRA] then:

A	Alarm Clock ..... Sets the alarm clock	A
B	Baud Rate ..... Sets speed for PAGE (TAP mode) and DATA mode	B
L	Low – 300 baud ..... (Default value)	BL
H	High – 1200 baud	BH
C	Canned Text ..... Create/Edit Canned Text	C
DA	Date ..... Date functions	DA
D	Display Date	DAD
D	Disable ..... Do not display Date on Date/Time displays	DADD
E	Enable ..... Display Date on Date/Time displays	DADE
F	Format ..... Set date display format	DAF
D	DD/MM/YY ..... Day/Month/Year	DAFD
M	MM/DD/YY ..... Month/Day/Year	DAFM
Y	Year	DAFY
D	Disable ..... Do not show Year in date display (Default)	DAYD
E	Enable ..... Show Year in date display	DAYE
S	Set Date ..... Set date	DAS
DI	Dialing Prefix ..... Digits to dial before dialing all numbers (if dialing through PBXs)	DI
F	Fax Options ..... Set Fax Options	F
H	Header	FH
D	Disable ..... Do not put Fax headers on Fax output	FHE
E	Enable ..... Put headers on Fax output (Default)	FHD
L	Line Counts ..... Maximum number of lines of Fax output per transmitted page	FL
B	Bottom Margin ..... Sets number of blank lines at end of Fax page	FLB
M	Maximum Per Page ..... Sets maximum number of lines on one page	FLM
T	Top Margin ..... Sets number of blank lines at the top of a Fax page	FLT
T	Time Display	FT
D	Disable ..... Do not include Time/Date in Fax header	FTD
E	Enable ..... Include Time/Date in Fax header (Default)	FTE

Extra Functions, cont'd

G	Group ..... Create/Edit Groups	G
H	Header Line ..... Create/Edit contents of the Fax header line which appears at the top of Fax output	H
I	I/O Options ..... DATA Mode Options	IO
F	Full Duplex ..... Full duplex communications (Default)	IOF
H	Half Duplex ..... Half duplex communications	IOH
K	Key Click	K
D	Disable ..... Do not click when keys are pressed	KD
E	Enable ..... Generate click when keys are pressed (Default)	KE
L	Lower Case ..... Shifts the keyboard to lower case	L
ME	Messages ..... Language of all prompts and messages	ME
E	English ..... Message in English (Default)	MEE
MO	Modem Type ..... Types of modem signalling	MO
B	Bell ..... Bell 103 is typically used in N. America (Default)	MOB
V	V.21 ..... V.21 is typically used in Europe	MOV
MR	Memory Reset ..... Erases all Memories in PAGENTRY and restores all information to default values. Performs the same operation as if the battery were removed for a long period of time. Asks user to enter "Y" (for Yes) before resetting the Memories and Parameters back to their defaults.	MR
N	Name of Owner ..... Name of PAGENTRY unit owner. This field is displayed when the From: line appears when entering a Fax memo.	N
O	Output Type	O
P	Pulse ..... Pulse dialing of telephone numbers	OP
T	Tone ..... Tone dialing of telephone numbers (Default)	OT
PARA	Parameters ..... Change PAGENTRY System Parameters	PARA
1	On/Off Hook ..... Time (in 100 millisecond periods) between telephone calls if dialing several calls in a row	PARA1
2	Auto Off Time ..... Period of time (in seconds) which is permitted between keystrokes. If no key is pressed within this period of time, PAGENTRY will automatically turn off its power.	PARA2

HOW-TO HOW-TO

Extra Functions, cont'd

3	TAP ID Tries ..... Maximum number of times PAGENTRY tries to get the remote paging system to respond before giving up.	PARA3
4	TAP Sign ons ..... Maximum number of times PAGENTRY tries to send a TAP sign on sequence after the paging system indicates that it is ready to receive a sign on	PARA4
5	TAP Timeouts ..... Maximum number of times a message is sent if the paging system does not respond to a message.	PARA5
6	TAP Xmt Tries ..... Maximum number of times a message is transmitted if the Paging system indicates the message was received with transmission errors.	PARA6
7	TAP ID Time ..... Maximum time (in 100 millisecond periods) to wait for an ID response.	PARA7
8	TAP Sign Time ..... Maximum time (in 100 millisecond periods) to wait for a response to a sign on request.	PARA8
9	TAP GA Time ..... Maximum time (in 100 millisecond periods) to wait for a go ahead from the paging system.	PARA9
A	TAP Blk Time ..... Maximum time (in 100 millisecond periods) to wait for a response to a message block which was transmitted.	PARAA
B	TAP Char Time ..... Maximum time (in 100 millisecond periods) between characters received from the paging system.	PARAB
C	TAP Sign On Delay ..... Delay (in 100 millisecond periods) after connecting to a paging terminal and before sending the TAP sign on sequence.	PARAC
D	Ring Time ..... Maximum ring time (in 100 millisecond periods) before an answer is expected.	PARAD
E	Pre-Dial Delay ..... Delay (in 100 millisecond periods) after going off hook and beginning to dial.	PARAE
F	DTMF Period ..... Period (in milliseconds) for a touchtone digit	PARAF

Extra Functions, cont'd

G	Fax Minimum Line Time ..... Minimum time period (in milliseconds) of one scan line of a Fax message.	PARAG
H	1st Ring Wait ..... Maximum expected delay (in 100 millisecond periods) before the first ring should be detected following a dial out.	PARAH

NOTE: Most Parameters (PARA) are never changed by the user. The default settings are sufficient. The TAP parameters should only be changed by the dealer.

PAR1	Parity ..... This sets the parity of Paging TAP mode and Data Mode transmissions.	PAR1
E	Even	PAR1E
O	Odd	PAR1O
M	Mark	PAR1M
N	None	PAR1N
PM	Paging Messages ..... Controls display of paging messages	PM
B	Buffer Msgs ..... Show all messages from Paging system while transmitting (default)	PMB
P	PAGENTRY Msgs ..... Show PAGENTRY-generated messages instead of messages from Paging system	PMP
R	Real Time Msgs ..... Show all messages from Paging system as they occur.	PMR
S	Show Stat Msgs	Show all Send and Waiting messages (default is No)	PMS
PO	Power Up Mode ..... Which Function or Mode is operational when the unit is turned on.	PO
C	Calculator ..... Power on in CALCulator Mode	POC
D	Data ..... Power on in DATA Mode	POD
F	Fax ..... Power on in FAX Mode	POF
K	Keep ..... Power on in KEEP Mode	POK
M	Message Blink ..... Power on with blinking prompt (Default)	POM
P	Page ..... Power on in PAGE Mode	POP
R	Recall ..... Power on in RECALL Mode	POR
TD	Time/Date ..... Power on shows Time and Date	POTD
TO	Time Only ..... Power on shows Time of day	POTO

Extra Functions, cont'd

PR Print	Generates a Fax message containing Directory information and parameter values. Prompts will ask for the name of the Fax machine to receive the information.	PR
R Reminder	Creates/Edits Reminders	R
SC Scroll Speed	Sets scroll speed (in 100 millisecond periods) for displays which scroll through the window.	SC
		SE
SE Security	Shuts off Security feature	SED
D Disable	Enables Security feature which requires entry of a password to access DIRECTORY Memory.	SEE
E Enable		
SM SEND Monitor	Display detailed call progress for all SEND Commands.	SM
D Disable	Disable monitoring of SENDS (Default)	SMD
E Enable	Enable monitoring of SENDs	SME
TD Time/Date	Displays the time, date, or both, depending on how the user has configured the current PAGENTRY Date and Time Parameters.	TD
TE Tests	Test Diagnostics	TE
D Display Test	Displays characters repeatedly until any key is pressed.	TED
F Fax Test	Sends test Fax message.	TEF
K Keyboard Test	Displays any keyboard character which is entered until ON/OFF is pressed.	TEK
		TEP
P Phone Tests		
D DTMF Test	Goes off hook and continuously dials DTMF digits 0123456789ABCD*# until any key is pressed.	TEPD
H Hook Test	Repeatedly goes off hook and on hook	TEPH

Extra Functions, cont'd

TI Time	Time functions	TI
D Display Time		TID
D Disable	Do not display Time on Date/Time displays	TIDD
E Enable	Display Time on Date/Time displays	TIDE
F Format	Format of Time display	TIF
M HH:MM		TIFM
S HH:MM:SS		TIFS
T HH:MM:SS.T		TIFT
S SetTime	Set Time	TIS
U Upper Case	Shifts keyboard to input upper case characters	U
V Version	Displays version number of PAGENTRY software	V
X Xon/Xoff	Controls DATA mode flow control	X
D Disable	Turns off flow control	XD
E Enable	Turns on flow control	XE
+ Darker Display	Increases contrast of display screen	+
– Dimmer Display	Decreases contrast of display screen	–

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SECTION II CONTENTS

DIRECTORY (KEEP Command)

The Directory is your "index card file"—the names, phone numbers, Fax numbers, Pager ID, and up to three fields of other information about your contacts which you enter into PAGENTRY's DIRECTORY Memory for permanent storage.

Creating New Records

To create new Directory records, use the [KEEP] Command. The Name: prompt is displayed, and the cursor is positioned at the far right of the display window, as is normal in Create Mode.

It's not necessary to enter information for each field. Just fill in those fields which will be required when the Directory entry will be used. PAGENTRY automatically stores new Directory names in alphabetical order. Whether you have typed anything or not, press [ENTER] to move to the next field.

After leaving the last field, the Name: prompt is displayed for you to enter another new record, or you can leave the KEEP Function by entering another PAGENTRY Command.

The Directory fields are:

Name: (A unique string of characters)

No other Directory or Group name can be the same as this one.

Info1: (Any string of characters)

This field can contain any desired information.

Info2: (Any string of characters)

This field can contain any desired information.

Info3: (Any string of characters)

This field can contain any desired information.

Tel #: (Numbers, spaces and hyphens)

The voice telephone number or the telephone number of a data service which may be called using this Directory entry.

Fax Tel#: (Numbers, spaces and hyphens)

The telephone number for Fax machine.

Pager Tel #: (Numbers, spaces and hyphens)

The phone number of the radio paging computer system.

Pager ID: (Normally numeric)

The ID number of the pager to alert.

(T)AP/(A)lpha

TAP or Alpha protocol.

PAGENTRY can transmit pager messages two ways. One way, known as TAP (Telocator Alpha Protocol), sends messages as special computer signals, called modem tones. The second method, known as Alpha-Tone,™ sends messages as normal telephone Touch-Tone digits. The paging company to which a pager is connected has a different telephone number for TAP calls and Alpha-Tone calls. Enter *"T" if the pager telephone number is for TAP calls and "A" if the number is for Alpha-Tone.* The default value is "T."

Access DIRECTORY Memory in Scan Mode (RECALL)

This function is called RECALL. Press the [RECALL] key. This places you at the Name: field of the first Directory record. If you have

stored any data, you will be in Scan Mode. Otherwise, it is just as if you gave the KEEP command — you are in Create Mode and can create a new record.

Move from one record to another with the [ENTER] Command. Look at or edit a record with [SELECT], or go to the end of Directory Memory with [+] [ENTER].

If you go to the end of Directory Memory, you will be in Create Mode, and should follow the instructions for the KEEP Command.

To Move Directly to a Specific Record

At the Name: prompt of any record in Scan Mode, type the first few characters of an existing Directory name and press [ENTER]. If the name as typed exists, PAGENTRY will take you directly to the Name: field of that record. You will be in Edit Mode. If the name does not exist (or was mistyped or misspelled), the error message "NO SUCH NAME!" appears in the display window for one second.

To Erase a Record

To erase a record you must be at the Name: field of the record you wish to delete, and in Edit Mode. Press [ERASE] [ENTER].

To Leave the Directory at Any Time

Type another PAGENTRY Command or turn off the unit.

GROUPS

A Group is a list of names which are in DIRECTORY Memory. A Group Name can be used wherever an individual name can be specified. When a Group Name is used, the message is sent to each individual in the Group.

Accessing GROUP Memory

Access GROUP Memory with the [EXTRA] [6] Command. The Grp Name: field is displayed. If there is no data in Memory, the cursor is present and you are in Create Mode.

If there is Group data, there is no cursor and you are in Scan Mode. You can scan through GROUP Memory with [ENTER], look at or edit a record with [SELECT], or go to the end of GROUP Memory with [+] [ENTER] where you can add new records. Or you can move directly to a specific record and switch into Edit Mode by typing the first few characters of a Group Name while in Scan Mode and pressing [ENTER].

Group Records

Each Group starts with a Grp Name: field. The name must be unique, unlike any other in either Directory or Group Memory.

The Grp Name: field is followed by one or more Member: fields. Each Member field can contain either a Directory Name or another Group Name. PAGENTRY automatically stores new Group Names in alphabetical order.

Creating New Groups

After entering data in each field, press [ENTER]. You can add as many Members as you wish. After typing the last Member: field, press [ENTER] twice to move to the Name: field of another new Group record. The Group fields are:

Grp Name: (A unique name)

The name cannot match any Directory or Group Name.

Member 1: (Any Directory or Group Name)
Member 2: (Any Directory or Group Name)
⋮
Member "n": (Any Directory or Group Name)

To Delete a Member

You must be at the Member: field of the record.
Press [ERASE] [ENTER].

To Delete a Group

You must be at the Grp Name: field of the record. Select the record with the [SELECT] key which will put you in Edit Mode.
Press [ERASE] [ENTER].

To Leave GROUP Memory

To leave GROUP Memory, type a PAGENTRY Command or turn off the unit.

CANNED TEXT

You can store as many pieces of Canned Text in Memory as you like. Records are sequentially numbered from number 1. Each record is a single field, so "record" and "field" are synonymous in CANNED TEXT Memory.

Accessing CANNED TEXT Memory

You can access CANNED TEXT Memory with the [EXTRA] [C] command. When you access CANNED TEXT Memory you always start in Scan Mode.

Move from one record to another with [ENTER], look at or edit a record with [SELECT], or go to the first empty record with [+] [ENTER] where you can add new Canned Text records.

To Move Directly to a Specific Canned Text Record

You must be in Scan Mode. Type the first few characters of the Canned Text phrase desired and press [ENTER]. The associated record is displayed in Edit Mode. You can make changes or just examine that record. When you are done, press [ENTER]. You'll be at the next Canned Text record in Scan Mode.

Create Mode/Creating New Canned Text Records

You can only enter Create Mode by pressing [SELECT].

1: (Any length of any kind of text)

Create Mode is a little different in CANNED TEXT Memory. Because you can erase text from any of the records, it is possible for empty records to occur throughout the CANNED TEXT Memory, rather than just at the end. So whenever you skip to an Empty Record via the [+] [ENTER] Command, you do not necessarily go to the end of

Memory. You go to the first empty record. When you complete your new entry and press [ENTER], you will go to the next record and be in Scan Mode again.

Using Canned Text

Any Canned Text record/field can be used as part of a Page, Fax, Reminder Message, or can be used in DATA Mode to send a stored Message. To insert a Canned Text phrase in your message, move to the place in the Message where you want to place the Canned Text. Type [EXTRA], followed by the record number of the desired Canned Text phrase, then [ENTER].

Once inserted in your Message, the text is just like any other text — as if you had typed it in from the keyboard. (It can even be edited.) Here's an example:

Canned Text 37 contains: "PLEASE CALL"
Canned Text 4 contains: "OFFICE"

MESSAGE: CAN YOU [EXTRA] [3] [7] [ENTER] THE [EXTRA] [4] [ENTER] NOW?

becomes: CAN YOU PLEASE CALL THE OFFICE NOW?

Deleting Canned Text

Select the Canned Text message to be deleted. Enter the Command [ERASE] [ENTER] to remove the Canned Text. The numbers associated with other Canned Text Messages will be unaffected when any Message is deleted. For example, if Canned Text Message 1 is "Please Call," 2 is "your office" and 3 is "your home," deleting Canned Text message 2 will still leave Canned Text Message 3 in memory as "your home." Canned Text Message 2 will remain blank and can be used to store a new phrase.

PAGING

Accessing PAGE Memory

Access PAGE Memory with the [PAGE] Command. The Page To: field is displayed. If there is no data in PAGE Memory, then the cursor is present and you are in Create Mode.

If there is data, there is no cursor and you are in Scan Mode. You can scan through memory with [ENTER], look at or edit a record with [SELECT], or go to the end of PAGE Memory with [+] [ENTER] where you can add new records. You can go directly to an existing record by typing the first few characters of the Page To: field, followed by [ENTER].

Creating New Page Records

After typing into each field, press [ENTER]. When you are finished making entries, you can either leave PAGE Memory or transmit all of the messages in Memory.

Page To: (One or more Directory and/or Group names)

Separate multiple entries with commas: John, Joe, Group7, Fred

Message: (Any amount of text)

To insert a Conned Text message, type [EXTRA], the Conned Text number, then [ENTER].

Only one field is allowed for Page Messages.

Leaving PAGE Memory

Enter another PAGENTRY Command or turn off the unit.

Sending a Page Message

You must be at the end of PAGE Memory. That is, the only thing in the display is the Page To: prompt, and the cursor is present. If you are not there, press [+] [ENTER] or keep pressing [ENTER] until you reach the first empty record and are in Edit Mode (with the cursor blinking).

Make sure the unit is connected to a phone line by plugging in the RJ11 cable between PAGENTRY and a telephone line modular jack. (See page 67.) Press [SEND] to begin sending Pages.

Multiple Destinations

If several Directory Names and Messages have been entered, PAGENTRY may need to place several calls to send the Messages. PAGENTRY can send multiple Pages on a single connection. It may also call several different paging systems during one SEND session if the individuals to be paged are on different paging systems.

Status Messages

PAGENTRY displays a message describing each step during transmission:

Offhook...	PAGENTRY has gone off hook and is awaiting a dial tone.
Dialing...	Once a dial tone is detected by PAGENTRY, the phone number is dialed.
Ringing...	The telephone is ringing or PAGENTRY is waiting for a response from the paging system.

Signing On...	PAGENTRY is establishing a connection to the paging system.
Sending...	Characters are being sent.
Accepted	Page delivered successfully.
Rejected!	Transmission failed.
Processing...	PAGENTRY is performing message processing in preparation for transmission.
No Response!	The paging system did not return any information about the acceptance of the Page request.
Re-Sending...	The Page request is being sent again.
Too Many Tries!	Repeated attempts to send the Page request have not resulted in a valid response from the paging system. The Page remains in Memory.
Disconnect Was Requested	The paging system requested that PAGENTRY disconnect from the system.

If a Message is rejected by the paging system it will remain in PAGE Memory so that you can try again at a later time or make changes to it if you like. If the message was successfully transmitted to all named destinations, it will automatically be deleted from Memory. If repeated attempts to send a page have failed, the page request can be removed from PAGE Memory by scanning to the Page To: field and typing [ERASE] [ENTER].

Aborting a Transmission

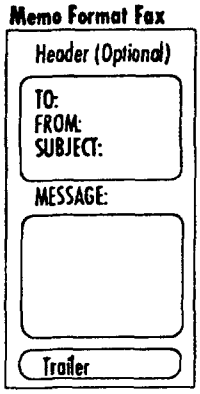
Press any key to abort a transmission in progress. The telephone line will be disconnected.

FAX OPERATIONS

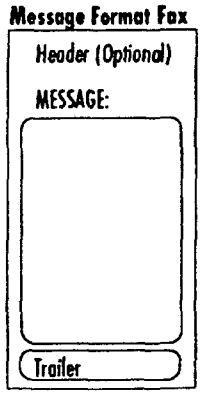
Overview

PAGENTRY Faxes consist of text which you enter. They can be transmitted in one of two formats – Memo or Message. Memo is formatted like a memorandum, with To, From and Subject lines. Message Format contains only the body of the Message. Either format can also have a Header line at the top. The Header can contain date and time and any desired text such as your name, address, and telephone numbers and other information.

Memo Format Fax



Message Format Fax



The Trailer is a built-in message which indicates that the Fax was transmitted by a portable device.

FAXING

To Access FAX Memory

Access FAX Memory with the [FAX] command. The Fax To: field is displayed. If there is no data in Memory, the cursor is present and you are in Create Mode.

If there is data, there is no cursor and you are in Scan Mode. You can scan through memory with [ENTER], look at or edit a record with [SELECT], or go to the end of Memory with [+] [ENTER] where you can add new records. You can go directly to an existing entry by typing the first few characters of the Fax To: field, followed by [ENTER].

Creating New Fax Records

The illustration below shows FAX Memory prompts. You can have as many Message fields as you want in the Message. Each Message field is transmitted as a separate paragraph. If you do not specify a To: field or Subject: field, the Fax will be sent in Message Format. Otherwise, a Memo will be created.

Press [ENTER] once after typing in each field, except for the last, where you press [ENTER] twice.

Fax To: (One or more Directory and/or Group Names)

Separate multiple entries with commas: John, Joe, Group7, Fred
This field does not show in the transmitted Fax.

TO: (Name of recipient)

Enter name to appear on the To: line of the Memo, if the output is to be in Memo format. Otherwise, leave this blank.

From: (Name of owner)

The first time this entry is ever made it becomes the default value. Every time you create a new Fax this name is displayed in the From: field. It can be edited or replaced for the Fax you are currently working on. Once entered, the default value for owner/sender can be permanently changed using the [EXTRA] [N] command.

Subject: (Any text)

Enter the subject of this message for Memo format, otherwise leave this field blank for Message format.

Message: (Any text)

To insert Canned Text as part of the message, type [EXTRA] [0] [N] [ENTER].

Each text field is one paragraph of Fax output. You may add as many paragraphs as you wish. After the last Message field, press [ENTER] twice.

Transmitting a Fax Message

You must be at the end of FAX Memory. That is, the only thing in the display is the Fax To: prompt, and the cursor is present. If you are not there, press [+] [ENTER] or keep pressing [ENTER] until you reach the first empty record and are put into Edit Mode (with the cursor blinking).

Make sure the unit is connected to a phone line by plugging in the RJ11 cable between PAGENTRY and a telephone line modular jack. (See page 67.) Press [SEND] to begin sending Faxes.

Header in Transmission

A Fax Header line is automatically included unless you have disabled the feature. (See [EXTRA] [H], page 25.)

Multiple Destinations

If several Directory and/or Group Names have been specified, multiple telephone calls may be required in order to deliver the Fax Messages to all destinations. PAGENTRY can deliver multiple Fax Messages to the same or different Fax machines.

Status

PAGENTRY displays a message describing each step during transmission:

Offhook...	PAGENTRY has gone off hook and is awaiting a dial tone.
Dialing...	Once a dial tone is detected by PAGENTRY, the Phone number is dialed.
Ringing...	The telephone is ringing or PAGENTRY is waiting for a response from the Fax machine.
Signing On...	PAGENTRY is establishing a connection to the Fax machine.
Faxing line ##...	Fax lines are transmitting.
Fax Accepted	Page delivered successfully.
Fax Rejected!	Transmission failed.
Processing...	PAGENTRY is performing message processing in preparation for transmission.

If a Fax was not successfully sent to a Fax machine, it will remain in FAX Memory. If the Fax was successfully sent to all named destinations, it will automatically be deleted from Fax memory.

Aborting a Transmission

Press any key to abort a transmission in progress. The telephone line will be disconnected.

Change FAX Header

The default Header is "PAGENTRY FAX/MEMO" followed by the date and time. To change the Header, press [EXTRA] [H]. At the Header: prompt, enter the text you want to appear on the Fax Header line and press [ENTER].

Headers in Transmissions

Inclusion of the Header in Fax transmissions can be enabled (included) or disabled (excluded). To enable the Header line press [EXTRA] [F] [H] [E]. To disable the Header line, press [EXTRA] [F] [H] [D].

Time and Date in Header

The display of Time and Date in a Fax Header can be included or excluded. To enable (include) the output of Time and Date in the Fax Header, type [EXTRA] [F] [T] [E]. To disable (exclude) the Time and Date, type [EXTRA] [F] [T] [D].

If the Fax Header is disabled, including Time and Date in the Header will have no effect since the Header will not output at all.